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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptopatentcommunication@lockclord.com

Office Action Summary	Application No.	Applicant(s)
	10/520,689	NILSSKOG ET AL.
	Examiner	Art Unit
	ATUL KHARE	4191

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 12 March 2009.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-17 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-17 is/are rejected.
 7) Claim(s) 7 and 10 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449)
 Paper No(s)/Mail Date 06 January 2005

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment filed on 12 March 2009 has been entered and fully considered.
2. Claims 1-17 are currently pending, of which claims 15-17 are new.
3. No new matter has been entered.

Specification

4. Objections set forth previously are withdrawn in view of the amendments to the specification filed on 12 March 2009.

Claim Objections

5. Objections set forth previously are withdrawn in view of the amendments to the claims filed on 12 March 2009.
6. Claim 7 is objected to because of the following informalities: The word "positions" in line 2 of the claim should be "positioned". Appropriate correction is required.
7. Claim 10 is objected to because of the following informalities: The word "dames" in line 2 of the claim should be "dams". Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. Rejections set forth previously are withdrawn in view of the amendments to the claims filed on 12 March 2009.
9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claim 1 states that "a studded plate is used at the formwork close of the first cast section". This language renders the claim unclear. In order to further examine the claims, this will be interpreted to mean that the studded plate is used at the outermost point of the formwork of the first cast section, facing the concrete that is to be cast into the form.

12. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigwald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

In the present instance, claim 1 recites the broad recitation "polygonal pattern", and the claim also recites "such as a hexagon, or other symmetrical or irregular design" which is the narrower statement of the range/limitation.

In the present instance, claim 7 recites the broad recitation "in a pattern", and the claim also recites "such as a square diamond, polygonal pattern" which is the narrower statement of the range/limitation.

In the present instance, claim 13 recites the broad recitation "large concrete components", and the claim also recites "including in bridges, tunnels, and in the walls of buildings, dams, or containers" which is the narrower statement of the range/limitation.

In the present instance, claim 14 recites the broad recitation including the ranges for dimensions of the studs in the studded plate, and the claim also recites "even more preferably where the studded plate is a PLATON DE25 plate" which is the narrower statement of the range/limitation.

In the present instance, claim 16 recites the broad recitation including the ranges for dimensions of the studs in the studded plate, and the claim also recites "even more preferably where the studded plate is a PLATON DE25 plate" which is the narrower statement of the range/limitation.

In the present instance, claim 17 recites the broad recitation "large concrete components", and the claim also recites "including in boxed walls on a free balanced cantilever" which is the narrower statement of the range/limitation.

In order to further examine the claims, only the broader recitations cited above will be considered as being required by the claims.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1, 2, 6, 10-14, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by WISE (US 3,618,888).

15. As to claim 1, WISE teaches the use of a casting form for making concrete slabs whose sides have grout keys (or studs - column 1 lines 3-6). The casting form having grout keys is stripped after a first cast section has been cast (column 1 lines 39-45). An adjacent concrete slab is grouted together side by side with the concrete slab having the design formed from the grout keys (column 3 lines 54-58). The studded plate of WISE is used at the formwork close of the first cast section to provide for a method of denticulation of concrete joints as required by the claim. See also figures 1-8.

16. As to claim 2, WISE teaches that the maximum stud width can be 2.5 inches (or 63.5mm – column 4 lines 6-7), and that the adjacent dimples may be spaced apart (between the base of the stud side walls) about 1 inch (or 25.4mm – column 4 lines 30-31). This puts the maximum center distance between the studs at approximately 3.5 inches, or 88.9mm, which falls within the range required by the claim. This also puts the distance between the base of the stud side walls at about 25.4mm, which falls within the

range required by the claim. WISE teaches that the depth (or height) of the dimple can be about one-fourth inch, or 6.4mm, which falls within the range required by the claim (column 4 lines 22-23).

17. As to claim 6, WISE teaches the use of dimples, or studs, that are rectangular or round (column 3 lines 49-50).

18. As to claim 10, WISE teaches a method of denticulation of cast concrete joints using a studded plate as a formwork as outlined in the rejection of claim 1 above. WISE teaches the use of his invention to lock adjacent concrete slabs against stresses normally encountered in a building as well as stresses occurring during an earthquake or excessive ground vibration (column 1 lines 10-13). According to MPEP 2111.02, if a prior art structure is capable of performing the intended use of a claim, then it meets the claim. Therefore, the use of a method of denticulation of concrete joints between cast joints in bridges as required by the claim is anticipated by WISE since the method disclosed by WISE is capable of being used between cast joints in bridges.

19. As to claim 11, WISE teaches a method of denticulation of cast concrete joints using a studded plate as a formwork as outlined in the rejection of claim 1 above. WISE teaches the use of his invention to lock adjacent concrete slabs against stresses normally encountered in a building as well as stresses occurring during an earthquake or excessive ground vibration (column 1 lines 10-13). According to MPEP 2111.02, if a prior art structure is capable of performing the intended use of a claim, then it meets the claim. Therefore, the use of a method of denticulation of concrete joints between cast joints in box walls on a free balanced cantilever as required by the claim is anticipated

by WISE since the method disclosed by WISE is capable of being used between cast joints in box walls on a free balanced cantilever.

20. As to claim 12, WISE teaches a method of denticulation of cast concrete joints using a studded plate as a formwork as outlined in the rejection of claim 1 above. WISE teaches the use of his invention to lock adjacent concrete slabs against stresses normally encountered in a building as well as stresses occurring during an earthquake or excessive ground vibration (column 1 lines 10-13). According to MPEP 2111.02, if a prior art structure is capable of performing the intended use of a claim, then it meets the claim. Therefore, the use of a method of denticulation of concrete joints on site or by prefabrication of components as required by the claim is anticipated by WISE since the method disclosed by WISE is capable of being used on site or by prefabrication of components.

21. As to claim 13, WISE teaches a method of denticulation of cast concrete joints using a studded plate as a formwork as outlined in the rejection of claim 1 above. WISE teaches the use of his invention to lock adjacent concrete slabs against stresses normally encountered in a building as well as stresses occurring during an earthquake or excessive ground vibration (column 1 lines 10-13). According to MPEP 2111.02, if a prior art structure is capable of performing the intended use of a claim, then it meets the claim. Therefore, the use of a method of denticulation of concrete joints between large concrete components as required by the claim is anticipated by WISE since the method disclosed by WISE is capable of being used between large concrete components.

22. As to claim 14, WISE teaches that the maximum stud width can be 2.5 inches (or 63.5mm – column 4 lines 6-7), and that the adjacent dimples may be spaced apart (between the base of the stud side walls) about 1 inch (or 25.4mm – column 4 lines 30-31). This puts the maximum center distance between the studs at approximately 3.5 inches, or 88.9mm, which falls within the range required by the claim. This also puts the distance between the base of the stud side walls at about 25.4mm, which falls within the range required by the claim. WISE teaches that the depth (or height) of the dimple can be about one-fourth inch, or 6.4mm, which falls within the range required by the claim (column 4 lines 22-23).

23. As to claim 17, WISE teaches a method of denticulation of cast concrete joints using a studded plate as a formwork as outlined in the rejection of claim 1 above. WISE teaches the use of his invention to lock adjacent concrete slabs against stresses normally encountered in a building as well as stresses occurring during an earthquake or excessive ground vibration (column 1 lines 10-13). According to MPEP 2111.02, if a prior art structure is capable of performing the intended use of a claim, then it meets the claim. Therefore, the use of a method of denticulation of concrete joints between large concrete components as required by the claim is anticipated by WISE since the method disclosed by WISE is capable of being used between large concrete components.

Claim Rejections - 35 USC § 103

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

26. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

27. Claims 3, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over WISE (US 3,618,888) as applied to claims 1, 2, 6, 10-14, and 17 above.

28. As to claim 3, WISE does not appear to explicitly disclose the stud side wall inclination angle. However, WISE teaches that the shape of each embossing (dimple) may vary, and that the slope of the dimple should satisfy geometrical conditions to enhance stripping of the studded plate from the concrete slab (column 3 lines 45-75).

At the time of the invention, it would have been *prima facie* obvious to a person having ordinary skill in the art to optimize the inclination angle of the stud side wall in order to satisfy geometrical conditions and help to enhance stripping of the studded plate from the concrete slab after it has been cast (column 3 lines 45-75).

29. As to claims 15 and 16, WISE teaches that the maximum stud width can be 2.5 inches (or 63.5mm – column 4 lines 6-7), and that the adjacent dimples may be spaced apart (between the base of the stud side walls) about 1 inch (or 25.4mm – column 4 lines 30-31). This puts the maximum center distance between the studs at approximately 3.5 inches, or 88.9mm, which is slightly above the range required by the claim. This puts the distance between the base of the stud side walls at about 25.4mm, which falls within the range required by the claim. WISE teaches that the depth (or height) of the dimple can be about one-fourth inch, or 6.4mm, which is slightly lower than the range required by the claim (column 4 lines 22-23). WISE additionally teaches that the shape of the embossing (dimple) may vary (column 3 lines 47-49). The adjacent dimples may have separation between them at a desired value, depending upon engineering considerations (column 4 lines 28-29). The dimensions of grout keys with various depths will provide for desired resistance to stresses in the final product (column 3 lines 54-58).

At the time of the invention, it would have been *prima facie* obvious to a person having ordinary skill in the art to modify the studded plate of WISE to achieve a center distance between the studs and a stud height that falls within the claimed ranges because the dimensions of the studs can be varied in order to optimize resistance to

stresses (column 3 lines 54-58).

30. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over WISE (US 3,618,888) as applied to claims 1, 2, 6, 10-14, and 17 above, and further in view of LEWIS (US 2,745,165).

31. As to claim 4, WISE does not appear to explicitly disclose that the studded plate has bridges or backs between the studs. However, LEWIS teaches the use of paving dowels having a portion extending into a first-poured concrete section which is filled by a subsequently poured section (column 1 lines 20-28). The portion extending into the first-poured concrete section is formed by a key strip on a form plate which is removed after the first section is cast (see item K in figures 1-4, and column 3 lines 25-45). This key strip has a recess (item 42 in figures 1 and 3) which is formed between two adjacent "studs" in the key strip (column 3 lines 17-19). This recess between the studs constitutes a back or bridge between the studs as required by the claim.

At the time of the invention, it would have been *prima facie* obvious to a person having ordinary skill in the art to use the studded plate of WISE having the design of LEWIS including a back or bridge between the studs because this design element was known in the art and because of the additional functions that such a bridge or back can provide during the casting process, such as allowing for the incorporation of additional casting elements (column 3 lines 17-21 of LEWIS).

32. Claims 5, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over WISE (US 3,618,888) as applied to claims 1, 2, 6, 10-14, and 17 above, and further in view of JOHNSEN (DE 4,328,787).

33. As to claim 5, WISE does not appear to explicitly disclose that the studded plate has a shape equivalent to a PLATON DE25 plate. However, WISE teaches that the shape of the embossing (dimple), and therefore the studded plate, may vary (column 3 lines 47-49). Additionally, JOHNSEN teaches the use of a studded plate that has the exact shape of a PLATON DE25 plate (as disclosed by applicant at [0030] and figures 1 and 2) as a drainage plate (see page 2 - section titled "area covered by invention", and figure 7).

At the time of the invention, it would have been *prima facie* obvious to a person having ordinary skill in the art to use the studded plate of WISE having the design of JOHNSEN because it was known in the art that the shape of the studded plate can be varied, and because the PLATON DE25 shape is a design that has been used in arts requiring studded plates for construction purposes (see column 3 lines 47-49 of WISE and page 2 section titled "area covered by invention" of JOHNSEN).

34. As to claim 7, the studded plate disclosed by JOHNSEN at figure 7 has a polygonal pattern.

35. As to claim 8, the pattern of the studs of the studded plate used by WISE is oriented parallel to or square to the direction of the primary shear, since his invention is used to lock adjacent concrete slabs against stresses normally encountered in a

building as well as stresses occurring during an earthquake or excessive ground vibration (column 1 lines 10-13). See also figures 1-8.

36. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over WISE (US 3,618,888) as applied to claims 1, 2, 6, 10-14, and 17, and further in view of SCHERTZBERG ET AL. (US 2002/0009566).

37. As to claim 9, WISE teaches a method of denticulation of cast concrete joints using a studded plate as a formwork as outlined in the rejection of claim 1 above. WISE does not appear to disclose a method of denticulation using a studded plate toward the first cast section comprising a hose or string of swellable rubber that is partly cast into the first cast section. However, SCHERTZBERG teaches the use of an injection hose to fill voids during concrete construction [0002]. The injection hose is embedded in a concrete cast section in order to fill voids left in concrete joints [0004].

At the time of the invention, it would have been *prima facie* obvious a person having ordinary skill in the art to use the embedded injection hose of SCHERTZBERG in the method of denticulation of concrete joints disclosed by WISE because of the need in the art to fill voids left in concrete joints during construction with materials such as epoxy ([0004] of SCHERTZBERG).

Response to Arguments

38. Applicant's arguments, see sections E and F, filed 12 March 2009, with respect to the rejection(s) of claim(s) 1, 4-8, and 10-13 under 35 U.S.C. 102(b), and claims 2, 3,

9, and 14 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art.

Conclusion

39. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ATUL KHARE whose telephone number is (571)270-7608. The examiner can normally be reached on Monday-Thursday 7:30 a.m. - 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571)272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ATUL KHARE/

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/Christina Johnson/
Supervisory Patent Examiner, Art Unit 1791

Examiner, Art Unit 1791